

COUNTY OF DUMFRIES.

THIRTY-SECOND

ANNUAL REPORT

UPON THE

*Health and Sanitary Condition of
the County.*

1922.


BY

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County Medical Officer.

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REPORT.

Population.

THE Report on the Thirteenth Decennial Census in Dumfriesshire, was published in the latter part of the year. The preliminary report in 1921 gave the number of people living in the County on June 19th as 75,365. The final report gives the figure as 75,370, or 2545 more than in 1911. Deducting the population of the Burgh of Dumfries (15,728), the rest of the County shows a population of 59,642. Of this number 14,042 are found in the Burghs of Annan, Sanquhar, Lochmaben, Moffat, and Langholm, and 45,600 in the five Local Government Districts. The Census figures and the figures of an enumeration by the police in 1922 in these Districts are:—

Districts.	Census 1921.			1922.		
	M.	F.	Total.	M.	F.	Total.
Thornhill	6,261	6,438	12,699	6,095	6,195	12,290
Dumfries	4,140	4,731	8,871	4,047	4,550	8,597
Annan	6,012	6,539	12,551	5,869	6,220	12,089
Lockerbie	4,077	4,332	8,409	3,834	4,100	7,934
Langholm	1,526	1,544	3,070	1,425	1,473	2,898
County L'ward	22,016	23,584	45,600	21,270	22,538	43,808

The Populations of the various Special Districts are given in the Census Report, and are:—

	Total.
Crawick (water)	288
Kirkcunel (water, drainage, lighting, and scavenging)	2642
Moniaive (water, drainage, and lighting)	573
Penpont (water and drainage)	399
Thornhill (drainage, scavenging and lighting)	1577
Blackshaw (water)	273
Dumfries Landward (water)	276
Glencaple (water and drainage)	225
Netherwood, Kelton, and Craigs (water)	321
Dalton (water)	98

	Total.
Eaglesfield (water)	503
Lower Annandale (water)	8296
Ruthwell and Raffles (water)	720
Bankshill (water)	42
Ecclefechan (water and scavenging)	1049
Rowanburn (water)	299
Do. (drainage and scavenging)	259

The total population of all the Water Districts is given as 16,482, of all the Drainage as 5,675, of the Scavenging as 5158, and of the Lighting as 4792. The figures for Thornhill Special District do not, however, seem quite reliable. The number of inhabited houses in Morton Parish is stated in the Report to be 448, of which 401 are in the Special District, leaving 47 in the Landward portion. The numbers in the Valuation Roll are 312 in the Special District and 159 in the Landward Parish.

The SEX and AGE DISTRIBUTION in the County Landward may be summarised from Table XXII. of the Report as follows :—

	M.	F.	Total.
Under 1 year	561	506	1,067
1—5 years	1,750	1,770	3,520
5—10 „	2,237	2,133	4,370
10—15 „	2,207	2,147	4,354
15—25 „	3,811	3,761	7,572
25—35 „	2,760	3,373	6,133
35—45 „	2,787	3,199	5,986
45—55 „	2,468	2,669	5,137
55—65 „	1,905	2,039	3,944
65—75 „	1,113	1,361	2,474
75—85 „	360	559	919
Over 85 „	47	61	108
Not stated	10	6	16
	<hr/> 22,016	<hr/> 23,584	<hr/> 45,600

The estimated population of the five Districts for 1922 is 43,808, of which 21,270 are male and 22,538

female. As already stated, this is based on an enumeration by the police.

Births.

The total number of Births in the County Landward was 1052 (545 male, 507 female), a decrease of 30 from the figure of the previous year. The rate per 1000 living was 24.014. The average rate for the previous ten years was 22.163. The figures for each District are :—

Districts.	M.	F.	Total.	Birth-rate per 1000 persons living.
Thornhill ..	184	152	336	27.339
Dumfries	92	92	184	21.402
Annan	134	146	280	23.162
Lockerbie .	109	88	197	24.829
Langholm ..	26	29	55	18.978
County Landward	545	507	1052	24.014

Of the 1052 births, 936 were legitimate and 116 illegitimate. The proportion of legitimate births to married women living between the ages of 15 and 45 was 220 per 1000. The figures for each District are :—

Districts.	Estimated number of married women living between 15 and 45.	Number of legitimate births	Rate per 1000 married women living between 15 and 45
Thornhill	1235	312	252.63
Dumfries ..	790	158	200.00
Annan	1221	250	204.75
Lockerbie ..	733	166	226.47
Langholm .	278	50	179.86
County L'ward	4257	936	219.87

The proportion of illegitimate births to unmarried women and widows living between the ages of 15 and 45 was 20.65 per 1000, and the proportion to total births 110 per 1000. The figures for the Districts are :—

Districts.	Estimated number of unmarried women and widows living between 15 and 45.	Number of illegitimate births.	Rates per 1000 unmarried women and widows living between 15 and 45.	Proportion of illegiti- mate to 1000 total births.
Thornhill	1468	24	16.35	71
Dumfries	1258	26	20.67	141
Annan	1501	30	19.99	107
Lockerbie	1028	31	30.16	155
Langholm	361	5	13.85	91
County Landward	5616	116	20.65	110

Notification of Births Acts, 1907 and 1915.

The number of births intimated under these Acts were 938, or 114 less than the number registered; but as 27 still-births are included in the number notified, the number of live births not notified would appear to be 141. The figures for each District are:—

Districts.	No. of persons notifying.			Births notified	Still- births.	Births registered.
	Medical.	Midwives.	Others.			
Thornhill	12	3	1	295	9	336
Dumfries	14	2		152	5	184
Annan	11	2		260	6	280
Lockerbie	11		1	179	5	197
Langholm	5			52	2	55

From the Burghs of Annan, Sanquhar, Lochmaben, Lockerbie, Moffat, and Langholm were also notified 227 births. The total number intimated to the County Health Office was 1165, of which 1097 were received from medical practitioners, 66 from midwives, and 2 from householders. In addition 13 were discovered by Nurses and Health Visitors, and 16 transfers in were received. Sixteen were removed outwith the County from the areas in which they had been born, leaving 1178 on the Register for 1922.

Six hundred and forty-six of these children and thirty-nine of those notified in 1921 have been visited and reported on during the year. This work has been carried out by one Health Visitor and eight District Nurses. A Health Visitor was on duty only during seven months. Miss

Somerville, who held the post, went on holiday on 1st June, and on 27th June sent a medical certificate that she was unable to return. Her place was not filled till 4th October, when two Health Visitors were appointed. One of these came on duty on October 23rd, the other not till January 6th, 1923. Of the 685 children, 211 were seen by the Health Visitor, the remainder by the District Nurses at Annan (117), Thornhill (95), Kirkconnel (91), Sanquhar (86), Dunscore (29), Glencairn (20), Carrutherstown (20), and Ruthwell (16). Of these, 68 per cent. were found to be wholly breast-fed, 7 per cent. partially, 20·16 per cent. were bottle-fed on cow's milk, and 4·83 per cent. on various infant foods.

The following conditions were noted :—

Eye affections (mostly slight discharges)	14
Ophthalmia Neonatorum	6
Digestive troubles	12
Bronchial Catarrh	9
Congenital Defects (Sp. Bif., &c.)	7
Skin Eruptions	7
Others	5

In one of the Digestive cases the child was found to be getting whisky "to relieve the wind."

By arrangement with the various Committees and Associations, the Health Visitor and District Nurses not only visited infants under the Child Welfare Scheme, but also gave assistance in Tuberculosis work and following-up cases of defects found at School Medical Inspections. The Health Visitor also attended at the female V.D. clinic.

Midwives (Scotland) Act, 1915.

Nine midwives certified by the Central Midwives' Board for Scotland intimated their intention to practise in the Districts of Thornhill, Dumfries, and Annan. No intimations were received from the Districts of Lockerbie and Langholm. The midwives who gave intimation are :—

In Thornhill District—

Jane Cardie, 4 Aisne Street, Kirkconnel.

Mary S. M. Watson, Wanlockhead.

Mary Waugh, Dunscore.

In Dumfries District—

Margaret Callander, Craigend Cottage, Dumfries.

Jane Clark, 14 Church Crescent, Dumfries.

Rachael Porteous, Gasstown, Dumfries.

In Annan District—

Ruth Evelyn Cromarty, 26 The Rand, Eastriggs.

Sarah Ferguson, C East 9, Gretna.

Annie Jane McCarl, Springfield, Gretna.

Practically all of these act as maternity nurses as well as midwives.

The births attended by midwives in 1922 and the percentages to the total numbers notified and registered were :—

Districts.	Attended by Midwives.	Total Births Notified.	Total Births Registered.	Percentages of Births attended by Midwives to Notified. Registered	
Thornhill	22	295	336	7.4	6.7
Dumfries	4	152	184	2.6	2.2
Annan	31	260	280	11.9	11.1

Two cases of Emergency in which medical practitioners were called in under Section 22 of the Act, during 1922 were notified, one in the practice of a midwife in Thornhill District, who gave "Still-birth" as the reason for her call; the other in the practice of an Annan District midwife, the reason given being "Adherent Placenta."

One case of Ophthalmia Neonatorum was intimated by a midwife. Investigation showed that it was not of the gonococcal variety, but a mild discharge occurring within fourteen days of birth.

No cases of Puerperal Fever were intimated by midwives, and none were known to have occurred during the year.

Three Still-births were intimated, two from Thornhill and one from Annan Districts. (Twenty-four such births were notified by medical practitioners.)

With regard to the wish of the Central Midwives' Board to be informed as to the salary of the Inspector of Midwives, it may be said that the County Medical Officer discharges this duty, but no part of his salary has as yet been allocated to the scheme.

Deaths.

The number of Deaths intimated by Registrars, the transfers (in and out), and consequent adjustments were :—

Districts.	Registered Deaths.	Transfers in.	Transfers out.	Adjusted figures		
				Total	M.	F.
Thornhill	170	23	7	186	87	99
Dumfries	203	17	108	112	58	54
Annan	156	19	6	169	71	98
Lockerbie	114	6	11	110	54	56
Langholm	43	6		48	27	21
County L'ward	686	71	132	625	297	328

The Registrar-General's figures for the five Districts when summed up show a total of 685 registered deaths, 59 transfers in and 83 transfers out, leaving after adjustment a total of 661 for statistical purposes. The difference between our figures is explained by the fact that the Registrar-General does not transfer deaths across the Border. This, he admits, operates hardly on Dumfriesshire, and more particularly the Dumfries District, in which the Crichton Royal Institution, with numerous patients from England and Ireland, is situated. On the other hand, no deaths are admitted from the Cumberland Infirmary, to which a considerable number of patients from the east side of the County are sent. Another cause of difference is the fact that his estimates of population sometimes differ considerably from the enumeration on which our estimates are based.

The death-rates, crude, corrected for transfers, and also for age and sex distribution in the five Districts are :—

Districts.	Crude death-rates.	Death-rates corrected for transfers.	Death-rates corrected also for age and sex distribution.	Rates according to Registrar-General.
Thornhill	14.646	15.134	13.663	13.0
Dumfries	23.612	13.027	10.920	14.0
Annan	12.904	13.980	12.778	11.7
Lockerbie	14.368	13.864	12.584	11.8
Langholm	14.837	16.563	14.057	12.9
County L'ward	15.659	14.267	12.588	12.5

The factors for correction of age and sex distribution are :—Thornhill District, .9028 : Dumfries, .8383 : Annan, .9140 : Lockerbie, .9077 : Langholm, .8487 : County Landward, .8823.

The classification of deaths according to cause in each District, and the death-rates, corrected for transfers and for age and sex distribution, are given in the two tables following :—

DEATHS IN COUNTY DISTRICTS IN 1922.

CAUSE OF DEATH.	Thorn- hill.	Dum- fries.	Annan.	Lock- ergie.	Lang- holm.	Count- y L'wd
Bacterial Fever . . . .	...	...	...	1	...	1
Typhus Fever . . . .	...	...	...	...	...	...
Smallpox . . . .	...	...	...	...	...	...
Measles	3	...	...	...	...	3
Scarlet Fever . . . .	...	...	...	1	...	1
Whooping-cough	1	1	4	1	...	7
Diphtheria	1	1	...	...	1	3
Influenza	7	2	15	5	2	31
Encephalitis Lethargica . . . .	...	...	...	...	...	...
Cerebro-spinal Meningitis . . . .	...	...	...	...	...	...
Other Epidemic Diseases . . . .	...	...	1	...	...	1
Pulmonary Phthisis	7	13	11	4	3	38
Tuberculous Meningitis	2	1	...	1	...	4
Abdominal Tuberculosis	1	1	1	1	...	4
Other Tuberculous Diseases	1	...	2	...	...	3
Malignant Tumours	16	8	17	15	5	61
Rheumatic Fever . . . .	...	...	...	...	1	1
Meningitis (not C.S. or Tub.)	2	...	...	3	1	6
Apoplexy	14	10	18	11	1	52
Heart Disease	26	10	16	22	11	85
Diseases of Arteries	2	3	7	6	1	19
Bronchitis	9	5	5	2	...	21
Pneumonia (all forms)	17	7	7	5	1	37
Other Respiratory Diseases	1	1	4	...	...	6
Enteritis (under 2 years) . . . .	...	2	...	...	...	2
Appendicitis	3	1	1	...	1	6
Liver Diseases (not Malignant)	1	...	1	1	...	3
Nephritis (Bright's Disease)	6	4	6	3	2	21
Puerperal Sepsis . . . .	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c. . . .	...	1	2	1	...	4
Diseases of Early Infancy and Malformations	15	11	18	5	3	52
Suicide	2	1	1	...	...	4
Violence (excluding Suicide)	4	6	3	1	1	15
Other Defined Diseases	38	23	27	21	14	123
Ill-Defined Diseases	7	...	4	...	...	11
TOTAL	186	112	169	110	48	625

DEATH-RATES IN COUNTY DISTRICTS IN 1922.

(CORRECTED FOR AGE AND SEX DISTRIBUTION.)

CAUSE OF DEATH.	Thornhill.	Dumfries.	Annan.	Lock- erbie.	Lang- holm.	County Low.
Enteric Fever . . . . .	...	...	...	114	...	92
Typhus Fever . . . . .	...	...	...	...	...	...
Smallpox . . . . .	...	...	...	...	...	...
Measles	220	...	...	...	...	300
Scarlet Fever . . . . .	...	...	...	114	...	320
Whooping-cough	073	097	304	114	...	141
Diphtheria	073	097	...	...	293	060
Influenza	514	195	1134	571	586	624
Encephalitis Lethargica . . . . .	...	...	...	...	...	...
Cerebro-spinal Meningitis . . . . .	...	...	...	...	...	...
Other Epidemic Diseases . . . . .	...	...	076	...	...	029
Pulmonary Phthisis	514	1267	832	457	878	765
Tuberculous Meningitis	147	097	...	114	...	081
Abdominal Tuberculosis	073	097	076	114	...	081
Other Tuberculous Diseases	073	...	151	...	...	060
Malignant Tumours	1175	780	1285	1713	1164	1228
Rheumatic Fever . . . . .	...	...	...	...	293	020
Meningitis (not C.S. or Tub.)	147	...	...	343	293	121
Apoplexy	1028	975	1210	1257	293	1047
Heart Disease	1910	975	1210	2515	3220	1711
Diseases of Arteries	147	292	529	686	293	383
Bronchitis	661	488	378	229	...	423
Pneumonia (all forms)	1249	682	529	571	293	745
Other Respiratory Diseases	073	097	304	...	...	121
Enteritis (under 2 years) . . . . .	...	195	...	...	...	041
Appendicitis	220	097	076	...	293	121
Liver Diseases (not Malignant)	073	...	076	114	...	060
Nephritis (Bright's Disease)	441	390	454	343	586	121
Puerperal Sepsis . . . . .	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c. . . . .	...	097	151	114	...	081
Diseases of Early Infancy and Malformations	1102	1072	1361	571	878	1047
Suicide	147	097	076	...	...	081
Violence (excluding Suicide)	294	585	227	114	293	392
Other Defined Diseases	2791	2242	2041	2401	4100	2470
Ill-Defined Diseases	514	...	304	...	...	221
TOTAL	13063	10920	12778	12584	14057	12588

The Deaths in the five Districts (County Landward)
classified in age groups and according to cause were:—

CAUSE OF DEATH.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-	All ages.
Enteric Fever . . .	...	...	...	...	1	...	...	...	...	...	...	...	1
Typhus Fever . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles . . .	...	3	...	...	...	...	...	...	...	...	...	...	3
Scarlet Fever . . .	...	...	...	1	...	...	...	...	...	...	...	...	1
Whooping-cough . .	4	2	1	...	...	...	...	...	...	...	...	...	7
Diphtheria . . .	...	1	1	1	...	...	...	...	...	...	...	...	3
Influenza . . .	1	...	...	...	3	3	3	4	2	8	4	3	31
Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	1	...	...	...	1
Pulmonary Phthisis .	...	...	...	4	10	9	6	2	3	2	2	...	38
Tuberculous Meningitis	...	4	...	...	...	...	...	...	...	...	...	...	4
Abdominal Tuberculosis	...	1	1	...	1	1	...	...	...	...	...	...	4
Other Tuberculous Diseases	...	...	1	1	...	...	1	...	...	...	...	...	3
Malignant Tumours .	...	...	...	...	...	...	4	12	16	14	13	2	61
Rheumatic Fever . .	...	...	...	...	...	...	1	...	...	...	...	...	1
Meningitis (not C.S. or Tub.)	4	...	...	1	...	...	1	...	...	...	...	...	6
Apoplexy . . .	...	...	...	...	...	...	2	7	28	15	...	...	52
Heart Disease . . .	...	...	...	1	3	1	5	4	12	33	24	2	85
Diseases of Arteries .	...	...	...	...	...	...	1	...	1	5	9	3	19
Bronchitis . . .	5	...	...	...	1	1	...	1	3	4	5	1	21
Pneumonia (all forms) .	8	4	...	2	2	...	...	2	8	7	2	2	37
Other Respiratory Diseases	2	1	...	...	...	...	1	1	1	...	...	...	6
Enteritis (under 2 years)	2	...	...	...	...	...	...	...	...	...	...	...	2
Appendicitis . . .	...	1	1	1	1	1	...	...	1	...	...	...	6
Liver Diseases (not Malignant)	...	1	...	...	...	...	...	1	...	...	...	1	3
Nephritis (Bright's Disease)	...	...	...	...	...	2	1	5	7	2	3	1	21
Puerperal Sepsis . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c. . .	...	...	...	...	1	1	1	1	...	...	...	...	4
Diseases of Early Infancy and Malformations .	52	...	...	...	...	...	...	...	...	...	...	...	52
Suicide . . .	...	...	...	...	1	...	...	1	1	1	...	...	4
Violence (excluding Suicide)	...	3	2	1	1	1	2	1	2	...	2	...	15
Other Defined Diseases .	8	...	3	1	4	4	3	11	18	15	41	15	123
Ill-Defined Diseases .	3	1	...	...	...	...	...	...	3	2	2	...	11
TOTAL . . .	89	22	10	14	29	24	30	48	86	121	122	59	625

The usual Infantile Mortality table is not now required by the Board of Health and is not given. But an index to this mortality will be found in the first column of the preceding table, which shows that the number of deaths of children under one year was 89. Of these, 53 were

deaths of male children and 36 of female. The rate per 1000 births was 84.56, the male rate being 97.26 and the female 71.00. The figures for the Districts are :—

	Deaths of children under 1 year of age.			Death-rates per 1000 births.		
	M.	F.	Total.	M.	F.	Total.
Thornhill	14	14	28	76.09	92.10	83.33
Dumfries	13	7	20	141.30	76.09	108.69
Annan	15	12	27	111.94	82.19	96.43
Lockerbie	9	2	11	82.57	22.73	55.84
Langholm	2	1	3	76.92	34.48	51.72

Of the 89, 25 (or 28.09 per cent.) were returned as due to Premature Birth, 17 (or 19 per cent.) to Congenital Debility, 6 (or 6.7 per cent.) to Malformations, and 15 (or 16.8 per cent.) to Bronchitis, Pneumonia, and Other Respiratory Diseases.

Zymotic deaths were 15. The rate per 1000 living was .302. The causes contributing to it were :—Enteric Fever (1), Measles (3), Scarlet Fever (1), Whooping-cough (7), and Diphtheria (3). The case of Enteric Fever was very obscure, the death being returned as due to Influenza, Enteric Fever, Toxæmia, and Lymphangitis. Just before death a positive Widal reaction was obtained.

The deaths from Diphtheria suggest a possibility of doctors being called in too late to permit of the antitoxin treatment having full effect. Where this is administered in the earliest stages the death-rate is practically *nil*, and it is generally agreed that in cases where the clinical symptoms point to diphtheria it is useful to give the anti-toxin at once without waiting for the report of the laboratory on any swab that may be taken. The drug has a prophylactic as well as a therapeutic effect.

Deaths where Influenza is given as one of the causes are now classified as due to this cause, but the term is somewhat loosely used. The Tubercular death-rate is on the decline. Malignant Diseases tend to appear more frequently

in the lists of causes of death but do not yet approach the mortality from Heart Diseases, the rate from which was 1.711 during 1922. The total rate from Respiratory Disease was 1.289. Of the 123 deaths classified as due to Other Defined Diseases, 52 were certified as from Senile Decay. Pernicious Anæmia was given as the cause of 9, and Diabetes of 8.

Infectious Diseases.

The total number of notifications of infectious diseases received from the County Landward during 1922 was three hundred and ninety-nine. Of these, 270 were notified under the provisions of the Infectious Diseases (Notification) Act, 1889, and 129 in terms of Regulations made under Section 78 of the Public Health (Scotland) Act, 1897. They comprised :—

(1) Notified under the provisions of the Infectious Diseases (Notification) Act, 1889 :—

Enteric Fever	3
Scarlet Fever	139
Diphtheria	99
Erysipelas	28
Continued Fever	1

(2) Notified in terms of Regulations made under the Public Health (Scotland) Act, 1897, Section 78 :—

Ophthalmia Neonatorum	6
Acute Primary Pneumonia	20
Acute Influenzal Pneumonia	3
Pulmonary Tuberculosis	69
Non-pulmonary Tuberculosis	31

The proportion of cases notified to 1000 persons was 9.11.

The notifications received each month were :—

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Enteric Fever ...	1										2		3
Scarlet Fever	9	8	7	2	9	20	10	10	9	25	18	12	139
Diphtheria	10	2	9	9		2	1	1	13	13	23	16	99
Erysipelas	1	3	1	2	3	2	5			3	4	4	28
Continued Fever			1										1
Ophthalmia													
Neonatorum			1	1					1	1	1	1	6
Pneumonia—													
Primary	3	4		1	3	1		2		1	3	2	20
Influenzal		1	1						1				3
Tuberculosis													
Pulmonary	2	7	8	4	8	7	7	4	2	6	8	6	69
Non-pulmonary	1	3	4	2	5	6	1	4	2		1	2	31
Totals	27	28	32	21	28	38	24	21	28	49	60	43	399

The Age-incidence is shown in the following summary of the returns for the five Districts made to the Board of Health :—

	At all ages	Under 1	1 and under 5	6 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upward
Enteric Fever	3				2		1	
Scarlet Fever	139		18	83	24	11	3	
Diphtheria	99	2	21	49	16	5	6	
Erysipelas	28		1	2	5	10	6	4
Continued Fever	1					1		
Ophthalmia								
Neonatorum	6	6						
Pneumonia—								
Primary	20	1	2	2	4	4	4	3
Influenzal	3				1	2		
Tuberculosis—								
Pulmonary	69			9	22	25	9	4
Non-pulmonary	31		11	7	7	5	1	
Totals	399	9	53	152	81	63	30	11

The notifications from each District were:—

	Thornhill.	Dumfries.	Annan.	Lockerbie.	Langholm.	Totals.
Enteric Fever .....	.....	.....	.....	3		3
Scarlet Fever ...	37	34	31	26	11	139
Diphtheria ...	39	24	26	7	3	99
Erysipelas ...	9	3	8	8		28
Continued Fever .....	.....	.....	.....	1		1
Ophthalmia						
Neonatorum	2	3	1			6
Pneumonia—						
Primary ...	10	2	4	4		20
Influenzal	2		1			3
Tuberculosis—						
Pulmonary ...	17	20	22	9	1	69
Non-pulmonary	12	6	12	1		31
Totals	128	92	105	59	15	399

No case of Smallpox was reported. The County has been free of this disease for a period of eighteen years.

One hundred and sixty-one intimations of Conscientious Objection to Vaccination were reported by Registrars—69 in Thornhill District, 16 in Dumfries, 44 in Annan, 31 in Lockerbie, and 1 in Langholm. Of the 69 intimated in Thornhill, 49 were from Kirkeconnel, which, from its overcrowded houses, is a centre of danger.

Three cases of Enteric Fever were notified from Lochmaben, Johnstone, and Moffat parishes—one in January, two in November. The former case was very obscure at first, the causes of death being stated as "Influenza, Enteric Fever, Toxæmia, Lymphangitis." A positive Widal reaction was obtained shortly before death. Of the two latter, one was associated with contaminated drinking water, while the other was an example of direct infection due to nursing the former in the early stages of his sickness, after his return home and before the condition was diagnosed.

The number of cases notified, deaths, and various rates during the past five years have been :—

	1918.	1919.	1920.	1921.	1922.
Cases	1	3	2	2	3
Deaths	1	0	0	0	1
Sickness-rate per 1000	·018	·058	·045	·044	·060
Mortality-rate per 1000	·018	nil.	nil.	nil.	·026
Case-fatality per 1000	1000·	nil.	nil.	nil.	33·3

One hundred and thirty-nine cases of **Scarlet Fever** were reported from thirty-four parishes—twenty-four in the first quarter of the year, thirty-one in the second, twenty-nine in the third, and fifty-five in the fourth. Ten per cent. of these were from Gretna and 11·5 per cent. from Kirkeconnel. One hundred and eleven families were affected, eighty-nine to the extent of one case in each, seventeen with two, four with three, and one with four in each. One hundred and twenty-five were admitted to Hospitals—thirty-four to Thornhill, fifty-three to Lochmaben, twenty-nine to Annan, and nine to Eskdale.

The number of cases and deaths, the sickness and mortality rates, and the case-fatality from this disease during the past five years in the County Landward were :

	1918.	1919.	1920.	1921.	1922.
Cases	76	138	74	108	139
Deaths	1	3	0	1	1
Sickness-rate per 1000	1·38	2·65	1·69	2·37	2·8
Mortality-rate per 1000	·018	·058	nil.	·02	·02
Case-fatality per 1000	13·16	21·73	nil.	9·26	7·2

The notifications of **Diphtheria** were ninety-nine, and were received from twenty-three parishes. Twenty-one were reported in the first quarter, eleven in the second, fifteen in the third, and fifty-two in the fourth. Seventy-three families were affected, fifty-eight having one in each, ten having two, two having three, and three other families had four, five, and six in each.

Eighty-four cases gave positive swabs showing Diphtheria Bacilli definitely present, twelve gave negative results, and three yielded swabs which were at first negative but afterwards positive. These figures refer only to the first examinations of the notified cases, and do not (except in the three cases which gave negative results before positive) include subsequent examinations or examinations of swabs from cases of sore throat about which the practitioner has been in doubt and which have been found definitely negative. The value of swabbing is very great, and the criticism that it may do harm by delaying the administration of antitoxin is hardly justifiable, as practitioners ought, in all cases where the clinical evidence is sufficient, to give the drug without waiting for the culture result. Eighty-three cases were removed to Hospitals—thirty-three to Thornhill, twenty-eight to Lichfield, and twenty-two to Amman. The number of cases notified, of deaths, and of various rates during the past five years have been :—

	1918.	1919	1920.	1921.	1922.
Cases	73	75	49	57	99
Deaths	3	3	5	4	3
Sickness-rate per 1000	1.33	1.44	1.118	1.251	1.995
Mortality-rate per 1000	.055	.058	.114	.078	.060
Case-fatality per 1000	41.09	40.00	102.04	70.175	50.203

Twenty-eight cases of Erysipelas were intimated. There was one fatality—in a man aged 64.

One case of Continued Fever, six of Ophthalmia Neonatorum, twenty of Primary Pneumonia, three of Influenzal Pneumonia, and one hundred of Tuberculosis were also notified. The case of Continued Fever was notified from Upper Amundale after Widal tests (for Enteric) proved negative. The intimations of Ophthalmia Neonatorum came from Kirkeconnel, Carronbridge, Kirkmahoe, Caerlaverock, Georgetown, and Eastriggs. In three instances Gonococci were found in the discharges from the eyes.

During the year ending 31st December, 1922, the number of cases of **Tuberculosis** notified in the County and the six Burghs of Annan, Sanquhar, Lockerbie, Moffat, Langholm, and Lochmaben was 119. One of these was withdrawn as not tuberculous, after consultation with the Tuberculosis Officer, leaving a total of 118. This is the smallest number of cases recorded in any year since the notification of all forms of Tuberculosis became compulsory, and is 20 less than the number in 1921.

The 118 cases may be classified as follows :—

	Males.	Females.	Total.
Pulmonary	46	35	81
Non-pulmonary	23	14	37
	—	—	—
Total	69	49	118

The number of cases notified in the County Landward and the six Burghs since 1914, with the rate of notifications per 1000 of the population, has been :—

Year.	Pulmonary.	Non-Pulmonary.	Total.	Rate per 1000 living.
1914	109	22	131	2.4
1915	89	45	134	2.5
1916	142	56	198	3.4
1917	117	54	171	2.6
1918	117	40	157	2.4
1919	95	44	139	2.3
1920	94	33	127	2.2
1921	98	40	138	2.3
1922	81	37	118	2.0

The Non-pulmonary cases comprised :—

Tuberculosis of Glands	13 cases.
Tuberculosis of Abdomen	11 „
Tuberculosis of Bones and Joints	11 „
Tuberculosis of Skin	1 „
Tuberculosis of Central Nervous System	1 „
Tuberculosis of Other Parts	„
	—
Total	37 „

In addition, 3 cases notified as Pulmonary had Non-pulmonary complications.

The QUARTERLY INCIDENCE of NOTIFICATIONS was —

First Quarter	28
Second Quarter	38
Third Quarter	22
Fourth Quarter	30
Total	118

The localities from which cases were notified were —

	Pulmonary.	Non-Pulmonary.	Total
Thornhill District	17	12	29
Dumfries District	20	6	26
Annan District	22	12	34
Lockerbie District	9	1	10
Langholm District	1		1
Annan Burgh	5	1	6
Sanquhar Burgh	2	2	4
Lockerbie Burgh	2	1	3
Moffat Burgh	2		2
Langholm Burgh	1	2	3
Lochmaben Burgh			
Total	81	37	118

The AGE-INCIDENCE of the cases was :—

Under 1 year	—
1 to 5 years	10
5 to 15 years	19
15 to 25 years	34
25 to 45 years	39
45 to 65 years	11
Over 65 years	5

Of the 89 above 15 years of age, 52 were insured persons under the National Insurance Acts, 37 were not.

Trade or Profession.

Of the total cases notified, 22 were of no occupation and 20 were school children. The remainder were employed as follows :—

Domestic Duties	29	Clerk	1
Farm Workers	8	Commercial Traveller	1
Labourers	8	Dressmaker	1
Miners	6	Gardener	1
Soldiers	5	Joiner	1
Railway Employees	3	Nurse (Hospital)	1
Shopkeepers and		Postal Employee	1
Assistants	3	Sailor	1
Blacksmiths	2	Shepherd	1
Banker	1	Slater	1
Carter	1		

In addition to those described as "soldiers," three other patients were ex-service men.

Housing Conditions.

Cases occurring in houses of 1 room	
Cases occurring in houses of 2 rooms	27
Cases occurring in houses of 3 rooms	21
Cases occurring in houses of 4 rooms	28
Cases occurring in houses of 5 rooms	4
Cases occurring in houses of over 5 rooms	17
Notified from Institutions	21

The cases occurring in houses of more than five rooms were, in many instances, domestic servants in large houses.

The institutions from which cases were notified were :

Crichton Royal Institution	11 cases.
Dumfries and Galloway Royal Infirmary	9 „
Ministry of Pensions Hospital, Gretna	1 „

After History.

Of the 118 notified cases, 25 had died. 5 had left the County, and 88 survived at the end of the year. Among the deaths—

3 took place before notification.

6 took place within a month of notification.

8 took place in one to three months after notification.

4 took place in three to six months after notification.

4 took place over six months after notification.

Treatment.

The general administrative methods remain as described in the last report.

Sanatorium and Hospital Treatment.

Of the 118 persons notified during 1922, 49 were admitted to Hospital or Sanatorium in the course of the year. In addition, 16 persons notified prior to 1st January, 1922, were admitted or re-admitted, making a total of 65. Their disposal was :—

	Notified in 1922.	Previously notified	Total
Lochmaben Hospital	17	10	27
Meathop (Westmorland)	11	2	13
Bridge-of-Weir			
Dumfries & Galloway Royal Infirmary	19	4	23
Other Institutions	2		2
	—	—	—
Total ...	49	16	65

Among those notified in 1922, 1 was admitted to Meathop and transferred to Lochmaben. 1 was admitted twice to the Dumfries and Galloway Royal Infirmary.

This figure (65) is equal to 55% of the year's notifications, the highest percentage of patients admitted to institutional treatment in any year—with one exception—since 1914. It must be admitted, however, that the machinery for obtaining institutional treatment in all necessary cases is still inadequate.

Provision of Medicines.

The system by which prescription books are issued to patients, the prescriptions checked in this office and forwarded to the Central Checking Bureau for pricing remain as before.

During the year under review medicine was provided for 49 patients. The total cost appears to have been £74 13s 6d, which is equal to £6 4s 5½d per month, or to £1 10s 5¾d per patient over the whole year.

The greatest amount spent on any one patient was £8 8s 4d over a period of 45 weeks, or an average of 3s 11½d per week.

Medical Comforts.

Those are generally supplies of eggs and milk, constituting extra nourishment which a patient's condition may demand but which he may not be in a position to procure for himself.

Such comforts have been supplied to eleven Pulmonary and one Non-pulmonary case during the year.

Medical Appliances.

None have been required during the year.

Shelters.

The Council possesses at present 30 shelters, three of those being in use at the tuberculosis pavilion, Lochmaben Hospital, leaving 27 available for use throughout the County. Twenty-five were occupied at the beginning of the year, and 9 additional patients received shelter treatment during the year, making a total of 34 persons so treated.

Prevalence of Tuberculosis.

The number of persons suffering, or who have suffered, from Tuberculosis now resident in the County is estimated as follows :—

	Pulmonary.	Non-Pulmonary.	Apparently arrested.	Total.
Thornhill District	31	38	65	134
Dumfries District	11	11	16	38*
Annan District	29	21	21	71†
Lockerbie District	24	4	14	42
Langholm District	2		1	3
Annan Burgh	10	4	4	18
Sanquhar Burgh	2	4	3	9
Lockerbie Burgh	6	2	4	12
Moffat Burgh	9		1	10
Langholm Burgh	12	3	9	24
Lochmaben Burgh	3	2	1	6
Total	139	89	139	367

* Excluding cases in C.R.I.

† Excluding cases in M.O.P Hospital, Gretna.

As the present necessity for economy entails the reviewing of different forms of public expenditure, it may be permissible to append a note epitomising the objects and methods of anti-tuberculous work.

Like other departments of Public Health activity, it is founded on an economic, rather than primarily a humanitarian ideal. It is assumed that a person in good health is a communal asset of value, while an invalid becomes, through no fault of his own, a burden on his friends or the public. Any measures which result in diminishing the amount of this invalidism are, obviously, of economic value.

It is sometimes argued that anti-tuberculous measures—and, indeed, Public Health endeavours generally—are directed towards the “preservation of the unfit.” The fallacy of such a position is evident when it is recollected that, in the absence of a hygienic policy, the “unfit” would not be quietly and rapidly eliminated, and cease thereafter to give trouble. They would continue to exist, for a while at least, becoming more unfit, more of a public burden; and the probability of their reducing those

in contact with them to their own degree of unfitness would be very materially increased. There is little use in invoking the powers of Natural Selection under the entirely unnatural conditions which modern civilisation has developed.

From the economic point of view, patients suffering from tuberculosis may be considered as falling into three categories :—

- (1) The early, curable case, who may be restored to health, and may repay the community, by his future work, for the expense incurred in his treatment.
- (2) The advanced case, where there is no hope of restoring the patient to a condition of economic value, but where measures must be taken to prevent his infecting others and reducing them to his own level of disability.
- (3) All other cases.

In actual practice, of course, it is not always possible to classify patients in this hard and fast way; but for descriptive purposes the grouping is perhaps allowable, and it indicates the principles which must govern administrative work. The early curable and the advanced infectious cases are economically of the first importance, and, with limited facilities for treatment available, they should receive first consideration.

The machinery adopted by the County Council for this purposes comprises :

- (1) Supervision of cases by Tuberculosis Officer.
 - (2) Visitation of cases by Health Visitor or Nurse.
 - (3) Provision of Medicines, Dressings, &c.
 - (4) Provision of Medical Comforts.
 - (5) Provision of Shelters.
 - (6) Treatment in Sanatorium or Hospital.
- (1) The Tuberculosis Officer's first duty is to confirm the diagnosis on notification being received. Not infrequently he is called in for consultation by the medical practitioner in charge of a doubtful case

before notification. The case having been accepted, he has then to decide into which category, as indicated above, the patient falls, and to determine as to the treatment appropriate—i.e., domiciliary, sanatorium, shelter, or hospital. He then makes arrangements for the treatment, and supervises its results.

- (2) The Health Visitor or Nurse visits from time to time and reports on patients, and, in some instances, performs the necessary dressings in surgical cases.
- (3) The provision of Medicines is a statutory obligation applying to all persons suffering from tuberculosis.
- (4) Provision of Medical Comforts, usually in the form of extra nourishment, is discretionary. The rule has been, in deciding whether such extra nourishment should be given, to consider whether it is likely to be of real use in restoring the patient to health, rather than whether his circumstances are, financially, satisfactory. It is not given merely on account of poverty, although of course a certain discretion in the matter has to be exercised, as, for example, in the case of a patient in whom no improvement can be anticipated, and whose family are unable to provide him with adequate nourishment save by cutting down their own.
- (5) Provision of Shelters was discussed in some detail in the report for 1919, and need not be further referred to here.
- (6) Treatment in Sanatorium or Hospital is given, by preference, to those in whom there is a hope of arresting the disease, or to those who are a menace to the health of their household companions.

The very limited accommodation hitherto available has restricted this form of activity. Patients frequently object to going to sanatoria at a distance from their homes—this is especially the case with married women—and thus

treatment for patients who would have accepted it had more beds been available locally.

A further disadvantage has been that it is generally necessary to discharge patients from sanatorium at the earliest possible date, to make room for other cases, although it would frequently be desirable to give a longer period of treatment. Again, the Tuberculosis Officer is often confronted with the problem of whether a vacant bed should be allotted to a promising case with a fair prospect of cure, or to a hopeless one who seems likely to breed fresh cases in his home circle.

The very early case, where the signs of disease are still doubtful but where the sum total of evidence seems to point to tuberculosis, is another type for which insufficient provision exists at present. A relatively short period in sanatorium in such cases will often attain a result which, a few years later, entails prolonged treatment and an uncertain outcome.

For certain classes of patients it has always been difficult to obtain beds. For example, boys of 10-14 years present a problem. They are too old to be treated in female wards, as younger children may be, and there are disadvantages in placing them in wards with adult male patients.

Cases of surgical tuberculosis, again, which are likely to require prolonged treatment—*i.e.*, tuberculosis of bones or joints—are also difficult to provide for in institutions, yet their home conditions may make successful domiciliary treatment impossible.

It is hoped that the extra accommodation which will be available when the new Sanatorium at Lochmaben is completed will go some way towards solving those problems.

Venereal Diseases.

Laboratory Examinations.—These numbered 220, and comprised 154 Wassermanns, 60 examinations for

(Gonococci, and 6 for *Spirochaeta Pallida* (see Laboratory Report).

Eighty-two of the examinations were made for patients attending at the Clinique at Kirkbank. Forty-one were of specimens sent by practitioners in Dumfries Burgh, twenty-seven from the rest of Dumfriesshire, twenty from Maxwelltown Burgh, eight from Kirkcudbrightshire, two from Newton-Stewart, one each from Dalbeattie and Castle-Douglas, and thirty-eight from the Dumfries and Galloway Royal Infirmary.

Out-Patient Treatment.—Thirty-nine cases attended for treatment in 1922 and eighteen old cases continued treatment, comprising in all 334 attendances, of which 218 were made by the new patients, an average of 5.6 to each. Twenty-seven suffered from Syphilis, nine from Gonorrhoea, one from both infections, and one was apparently only a septic condition.

Eighteen patients completed a first course.

Eleven patients ceased to attend, and three have left the County.

Ex-patients are instructed to attend at three, six, and twelve-monthly intervals for blood tests.

One hundred and ninety-eight doses of Novarsenobillon were given intra-venously, and 54 hypodermic doses of Gonorrhoeal Vaccine. Practitioners were supplied with 47 doses of Salvarsan substitutes.

Hospitals.

One hundred and twenty-three cases of Scarlet Fever, eighty-three of Diphtheria, and three of Enteric Fever were removed to Hospitals from Districts: eighty-six of Scarlet Fever, sixteen of Diphtheria, and one of Erysipelas from Burghs.

The admissions were:—

		Enteric Fever.	Scarlet Fever.	Diph- theria.	Erysi- pelas.	
Thornhill	Thornhill District		34	33		77
	Sanquhar Burgh		7	3		
Lochmaben	Dumfries District		29	22		123
	Lockerbie District	3	20	6		
	Lochmaben Burgh		2	1		
	Lockerbie Burgh		38	1	1	
	Moffat Burgh		..			
Annan	Annan District		29	22		96
	Annan Burgh		33	4		
	Lockerbie District		2			
	Lockerbie Burgh		6			
Eskdale	Langholm District		9			16
	Langholm Burgh		....	7	

In addition to the above, twenty-seven cases of Tuberculosis were admitted to Lochmaben Hospital from various parts of the County.

Housing.

The Census Report for 1921 shows, as regards the numbers of occupied houses, that there were thirteen parishes in which there was an increase (amounting to 1003) on the figures for 1911, twenty-six in which there was a decrease of 270, and four in which the figures were exactly the same. In five the increases were substantial—Kirkcconnel 190, Sanquhar 49, Dumfries 82, Dornock 234, and Gretna 413. The increases are due to industrial conditions, and, in the cases of Dornock and Gretna, to the establishment of the cordite factory for war reasons. The parish which shows the greatest decrease is Closeburn, there being 47 fewer occupied houses than in 1911. The industrial conditions have not been satisfied everywhere, *e.g.*, at Beattock, where there is a demand for from 35 to 40 houses, which has not yet been met mainly because of the difficulties of finding a suitable water supply at a non-prohibitive cost. As explained in the previous report the scheme for 200 houses at Kirkcconnel has been cut down

by the Board of Health to 74, of which twenty-four are completed and occupied.

There is still very definite overcrowding in other parts of this village. Of twenty one-roomed houses 8 are occupied by three persons each, 6 by four, one by five, and one by six.

Of two-roomed houses, 33 are occupied by seven persons in each, 27 by eight, 23 by nine, 15 by ten, 11 by eleven, 3 by twelve, one by thirteen, and one by fourteen.

Of three-roomed houses, 11 are occupied by eight persons in each, 3 by nine, 13 by ten, 6 by eleven, 2 by twelve, 3 by thirteen each, and one by seventeen.

The complaints of defective housing conditions were :—

	Houses damp or out of repair.	Defective water supplies.	Defective fittings and drains.	Defective privy accommoda- tion.	Offensive substance or refuse accumu- lation.	Totals
Thornhill District	4	1	3	1	2	11
Dumfries District	6	1	1		5	13
Annan District ..	9	1	3		1	14
Lockerbie District ..	4	3				7
Langholm District	1	2				3
	—	—	—	—	—	—
	24	8	7	1	8	48

The letters and intimations under the provisions of the Public Health (Scotland) Act, 1897, Section 19, were :—

	Houses damp or out of repair.	Defective water supplies.	Defective fittings and drains.	Defective privy accommoda- tion.	Offensive sub- stance or refuse accumulations.	Totals
Thornhill District	4	3	7	2	3	19
Dumfries District	18	6	15	7	4	50
Annan District	9	2	9	2		22
Lockerbie District	9	3	2	2		16
Langholm District	1					1
	—	—	—	—	—	—
	41	14	33	13	7	108

The number of intimations is less than usual, owing partly to fewer complaints being received, but principally to the fact that the Senior Sanitary Inspector was off duty for over eight months on account of serious illness. The number of visits of inspection to houses was 719.

Plans were submitted for the erection of seventeen new houses, and additions to or alterations on thirty. Intimations of intention to build one new house and make alterations on two were received. Of the new houses, thirteen were of wood, some of them (e.g., at Moniaive and Glencaple) being intended as summer residences. A hostel to accommodate 100 unmarried men at Kirkconnel was approved, and is in course of erection. Twelve of the plans for alterations on houses were submitted by the Board of Agriculture for Scotland, who also submitted a number of plans (32) of alterations on steadings for Smallholders.

Water Supplies.

Samples for both chemical and bacteriological examinations were taken each quarter from the supplies to the fourteen Special Districts and Thornhill. The results were generally favourable, and there was less variation than in 1921. The samples from Blackshaw, Eaglesfield, and Ecclefechan showed on each occasion low bacterial contents and a very favourable chemical analysis. Thornhill, Penpont, Kirkconnel, Rockhall, and Ruthwell and Raffles yielded highly favourable results in three of the four samples. Thornhill and Penpont had a rather high bacterial contents in the first quarter, Kirkconnel in the second quarter along with some matters in suspension. Rockhall, while very good bacteriologically, deposited oxide of iron. Ruthwell and Raffles had *B. coli* present in 10 c.c. in the fourth but absent from 100 c.c. in the three previous quarters. In it also the albuminoid ammonia was rather high, and a deposit of oxide of iron took place. Moniaive, Crawick, Dumfries Landward, Glencaple, Lower Annandale, Bankhill, and Rowanburn each showed on two

occasions an increase in the bacterial contents. Moniaive, Dumfries Landward, Glencaple, and Lower Annandale gave also somewhat high results in albuminoid ammonia. The latter has been fairly high in this respect for some time, indicating a slight amount of vegetable contamination which has been attributed to a patch of vegetation on the north-east side of the reservoir that was not fully cleared away.

Sixty-three samples of the supply to Grètna and Eastriggs Townships were examined bacteriologically to watch the effects of chemical treatment and filtration, which was invariably found sufficient to withdraw the organisms of intestinal origin from the raw water of the river Esk.

Thirty-two samples from private supplies were examined both chemically and bacteriologically. The results were intimated to parties responsible and advice given, or action taken, as the circumstances required.

Disposal of Sewage and Pollution of Streams.

The disposal of sewage from the Burghs and Special Drainage Districts remains much as it was when last reported on. There is, however, the possibility that before long the sewage from the Burgh of Langholm will be dealt with by tanking before being discharged into the Esk, the Engineer of the scheme being apparently of opinion that the volume of water will be sufficient to render innocuous and free from nuisance any putrescent effluent from a tank in which the sewage will undergo a short period of septic action. The site of the tank is quite near to the town and public road, and it remains to be seen how far the effluent will be free of offence and the removal of sludge effected without the creation of nuisance.

The village of Rowanburn, where the water carriage system prevails, discharges crude sewage into the stream at three points. The problem here is one of finance, and unfortunately one of grave difficulty, as a satisfactory purification can only be obtained at an excessive cost, the

volume of the stream not being sufficient (as is claimed at Langholm) to effectually dilute a tank effluent. The valuation of the Special District is £342.

Pollution of the Annan is not now a really serious matter. The effluents from the sewage purification works at Moffat and at Lockerbie are discharged into tributaries of the river, in which they are subjected to further oxidation, so that they have practically lost all putrescence before joining the main stream. No complaints regarding them have been received for a very considerable time. The sewage of the burgh of Annan is almost all discharged into tidal waters well below the town, and has never been the subject of complaint.

Complaints of pollution of the Nith have been more numerous than usual, and whatever may be the cause, black water is much more frequently seen at Guildhall Bridge, in the parish of Kirkeconnel. As there are no collieries between this point and New Cumnock it is evident that this black water must have come from the pits there, although there may be different views as to whether it has come direct or from stirred-up sediment in the "loops" of Nith. The pit owners are inclined to shelter themselves behind the plea that the discolouration of the water is due to pumping from the mine. The wording of Section 3 of the Rivers Pollution Prevention Act, 1876, makes it somewhat difficult to get round this, and, as has been not unfairly suggested, makes the Act, so far as coal-washing is concerned, an Act for the Protection of River Polluters. There does not seem to be any reason why water pumped from a mine should not be freed of suspended impurities before being discharged into a stream. The discharge from coal-washing ponds at Kirkeconnel and Gateside has usually a much better appearance than the water at Guildhall Bridge, but occasionally accidents occur.

Another form of industrial pollution in the upper reaches is from the ponds below Wanlockhead lead mines. At first these were satisfactory, but recently, when they

were silted up, lead in small quantities has been found in the Wanlock and Crawick. The Company have had their attention drawn to the matter, and further samples will be taken. In the lower reaches industrial pollution occurs from the mills discharging into the tidal portion, but before any action can be taken the river must be declared a stream for the purposes of the Rivers Pollution Prevention Act and the consent of the Board of Health obtained.

The sewage purification works at Kirkconnel are now working at their full capacity, and there is some risk that they may not accomplish all they have done in the past. At Sanquhar a beginning is being made to deal with the crude sewage from the north-west of the Burgh. The works at the south-east are satisfactory, with the exception that the fixed distributors are to some extent affected by warping, so that the passage of the tank effluent on to the continuous filter is not altogether uniform. At Thornhill it is hoped that some improvement may be effected. The works are too small for the amount of sewage passing through them, and it has been suggested that a report should be obtained from an engineer as to the possibility of by-passing the least noxious portion of the flow.

Cleansing and Scavenging.

Work in the four Special Scavenging Districts—Kirkconnel, Thornhill, Ecclefechan, and Rowanburn—continues to be satisfactorily performed. The ashpits in Rowanburn are of a size in excess of the requirements, and their situation makes them an eyesore. It would be a very great improvement if they could be reduced, or abolished altogether. In certain of the other areas the ashpit accumulations give rise to nuisance and, in summer, trouble from flies. The disposal of refuse in rural districts is a problem for individual householders, who should have facilities for preventing the formation of such unhygienic accumulations.

Dairies and Cowsheds.

The number on the Register is 450, of which there are 156 in Thornhill District, 102 in Dumfries, 70 in Annan, 104 in Lockerbie, and 18 in Langholm. A few of these are not at present engaged in selling milk, but desire to remain on the Register. The visits paid by the Veterinary Inspector were 223. Arrangements have now been made by which he will, it is hoped, be able to visit each dairy once a year, and oftener if defects are found. Ten letters were issued regarding contraventions of the Dairies Regulations.

On 11th December, 1922, the Board of Health issued an order—The Milk (Special Designations) Order (Scotland), 1922—empowering Local Authorities to grant licences authorising the sale of milk under the designations of—

- (1) Certified Milk :
- (2) Grade A (Tuberculin Tested) Milk :
- (3) Grade A Milk : and
- (4) Pasteurised Milk.

In the case of (1) and (2) the herds must pass tests, both hypodermic and ophthalmic, made at intervals of six months, and must be subjected to a clinical examination at least three times a year. The methods employed in producing, storing, treating, and distributing the milk are to be the subject of a "score-card inspection," and must obtain fifty per cent. of marks. Both (1) and (2) must contain not less than 3.5 per cent. of fat. Certified milk must not contain more than 30,000 bacteria per c.c. nor *B. coli* in 0.1 c.c. Grade A (Tuberculin Tested) Milk must not contain more than 200,000 bacteria per c.c. nor *B. coli* in 0.1 c.c. In the case of (1) Certified Milk, this must be bottled on the farm for delivery to the consumer. In the case of (2) the milk may be sent to the retailer in bulk, but must be bottled by him. In both cases the bottles used must be previously sterilised by steam, and the milk delivered in these bottles to consumer.

(3) Grade A Milk must be produced from animals which are clinically examined at least three times a year at intervals of not less than three and not more than five months. Any animal showing signs of disease is to be removed from the herd, but the tuberculin test not being made, no guarantee of freedom from tuberculosis is given by the licence. If, however, tubercle bacilli are found in the milk, the producer must ascertain the animal or animals from whom these come, remove them from the herd, and inform the Local Authority of the method of their disposal. The conditions regarding bacteria and bottling are the same as those for Grade A (Tuberculin Tested).

(4) Pasteurised Milk is (under an Amending Order) milk that has been treated not more than once by any suitable heating process which makes it capable of complying with the condition that a sample taken at any time after pasteurisation must not contain more than 30,000 bacteria per c.c. nor any *bacillus coli* on the examination of a tube containing one-tenth of a cubic centimetre. The rules as to bottling apply to this milk also.

All licences require to be renewed once a year, being valid only to December 31st in each year of issue. As yet only four enquiries regarding them have been received.

Slaughter-Houses.

The Licensed Slaughter-houses are twelve, a new one having been added to the number in Thornhill. The Veterinary Inspector was able to make twenty-one visits, and reported favourably on them. Since the end of the year, however, two of the slaughter-houses were found less satisfactory than they should be, and the licensees required to have their attention drawn to the regulations. At another, where carcasses are loaded on to railway vans, the attention of the Railway Company was drawn to the state of the vans. The situations of the slaughter-houses for which licences have been asked are Kirkcannel, Thorn-

hill (3), Penpont, Moniaive, and Dunscore in Thornhill District; Raeks in Dumfries; Dornocktown and Kirkpatrick-Fleming in Annan; Templand in Lockèrbie; and Lymiecleeugh in Langholm District.

Offensive Trades.

The premises sanctioned and licensed for these are:

- (1) A Bone-boiling business at Thornhill.
- (2) A Knackery at Mossparc.
- (3) A Manure Manufactory at Mossparc.
- (4) A Tallow-melting Factory at Raeks.

Provisional sanction has been given to extensions at the first of these. The business is conducted in a very satisfactory way in closed digesters, and no escape of noxious fumes into the atmosphere has been known to occur. The closed digesters installed at Mossparc have effected a very considerable improvement there. The Tallow-melting Factory at Raeks is usually quite free of offence, but the dung-heap beside it (for which the licensee of the Slaughter-house is largely responsible) is not always kept as carefully and emptied as frequently as it should be.

Factories and Workshops.

Only twenty-five visits have been paid to these and to premises of Outworkers. This has largely been due to the prolonged illness of one of the two Sanitary Inspectors. Mr William Macnae, who for the period of thirty-one years has been a most loyal colleague and good friend, and whose retirement is much regretted. The Factories and Workshops in the rural areas of the County do not, however, present a serious problem, and no intimation of defect or contravention has been received from the Factory Inspector.

BURGH OF ANNAN.

Area, 383 acres:

Population.—The Census (1921) population was 3928 (male 1817, female 2111). The estimated population for 1922 is 3943 (1809 male, 2134 female).

Births.—The number registered in the Burgh during the year was 69 (38 male, 31 female). The rate per 1000 living was 17·498. This is below the rate of last year (24·658), and also below the averages of the three previous decades—21·543 in 1911-20; 28·947 in 1901-1910; 29·692 in 1891-1900. It is also the lowest rate of all years but one during the past thirty (16·675 in 1918).

Six births, or 8·7 per cent., were illegitimate. The rate per 1000 unmarried women and widows living between the ages of 15 and 45 (estimated at 545) was 11·01.

The legitimate birth-rate per 1000 married women living between the ages of 15 and 45 (estimated at 415) was 151·8.

Fifty-four births were intimated under the provisions of the Notification of Births Acts. They included two premature and one still-birth. There are no midwives within the meaning of the Midwives (Scotland) Act, 1915, known to be practising in the area.

Deaths.—The number registered was 63. One death of a non-resident fell to be deducted, and three deaths of usual residents which occurred elsewhere to be added, making the number for statistical purposes 65, of which 21 were male and 44 female deaths. The crude death-rate—that is, the death-rate on the registered figures only—was 15·977 per 1000; on the figures adjusted for transfers it was 16·484, which the correction for age and sex-distribution (factor ·9634) reduces to 15·881. The corrected death-rate for 1921 was 12·255. The average death-rate for 1911-20 was 15·456; for 1901-1910, 14·946; and for 1891-1900, 20·903. The deaths from various causes are shown in age-groups in the following table:—

BURGH OF ANNAN.—DEATHS IN 1922.

CAUSE OF DEATH.	All ages.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-	Rate per 1000
Enteric Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	1	...	1	...	...	...	...	...	...	...	...	...	...	...
Influenza	5	...	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis Lethargica . . . . .	...	...	...	...	...	...	...	...	1	2	2	...	...	1.222
Cerebro-spinal Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Phthisis	2	...	...	...	...	...	...	1	...	1	...	...	...	...
Tuberculous Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	489
Abdominal Tuberculosis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malignant Tumours	5	...	...	...	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever . . . . .	...	...	...	...	...	...	...	...	...	...	4	1	...	1.222
Meningitis (not C.S. or Tub.)	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Apoplexy	12	...	...	...	...	...	...	...	...	...	...	...	...	244
Heart Disease	5	...	...	...	...	...	...	...	...	3	6	2	1	2.932
Diseases of Arteries	10	...	...	...	...	...	...	...	4	1	...	...	...	1.222
Bronchitis	3	1	1	...	...	...	...	...	...	...	2	7	1	2.443
Pneumonia (all forms)	5	1	1	...	...	...	...	...	...	...	1	...	...	733
Other Respiratory Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	2	1	...	1.222
Enteritis (under 2 years) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver Diseases (not Malignant)	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Nephritis (Bright's Disease)	2	...	...	...	...	...	...	1	...	1	1	...	...	214
Puerperal Sepsis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	733
Other Diseases and Accidents of Pregnancy, &c. . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Early Infancy and Malformations	3	3	...	...	...	...	...	...	...	...	...	...	...	...
Suicide	1	...	...	...	...	...	...	1	...	...	...	...	...	733
Violence (excluding Suicide) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	244
Other Defined Diseases	8	...	...	...	...	...	...	...	1	...	1	3	3	1.955
Ill-Defined Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	65	5	3	...	...	...	2	3	6	8	19	11	5	15.881

The diseases causing the chief mortality during the year have been those of Heart and Arteries, and if we add to them the deaths returned as due to Apoplexy or Cerebral Hæmorrhage we find that they contribute considerably more than one-third to the death-rate. The Zymotic and Tuberculous death-rates are low.

The special table of Infantile Mortality is not now required by the Board of Health, but some particulars are given in the first column of the preceding table. There were in all five deaths of children under one year of age, or a percentage of 7.7 per cent. of the whole. Two occurred in the first week of life, two in the third week, and one in the ninth month. The causes of death were Bronchitis 1, Broncho-pneumonia 1, Congenital Debility 2, and Premature Birth 1. The infantile mortality-rate (calculated per 1000 births) was 72. In 1921 it was 112. The average rate for the 10 years (1911-20) was 85, for the twenty years (1891-1910) it was 123.

Infectious Diseases.—One case of Enteric Fever was intimated. The diagnosis was only established by a blood test (Widal) made in the second week of illness. No association with the three cases mentioned in last Annual Report could be ascertained. The illness began in January. Death took place in September from Cholecystitis and Hepatic Abscess, which were certified to be late sequelæ of Enteric Fever.

There was an outbreak of Scarlet Fever in February. The notifications during that month were four, but rose during March to twelve. After this month an abatement took place, the figures for April to July being nine. In August they were five, and during the next three months six cases came under observation, there being three notifications in September, one in October, and two in November. The attacks were generally mild, and no fatalities occurred. Two of the cases in March had attended school for nearly a fortnight, and were only discovered when other children had become infected. This, along with the distribution

in time of the notifications, is evidence of the difficulty of stamping out Scarlet Fever. The disease may assume such a mild form that a sufferer is not always recognised to be ill, although infective, and it is not until infection is found to have passed that the individual comes under observation. The thirty-six cases were found in twenty-five families, there being seventeen with one case in each, six with two, one with three, and one with four.

Four cases of Diphtheria were reported, one in January, one in May, and two in October. One of the cases of Scarlet Fever was found to have Diphtheria Bacilli on the throat in March. One of the others was reported for observation, and did not show these bacilli on examination of throat swabs. There was one fatality, a case of Laryngeal Diphtheria.

The other notifications included two cases of Erysipelas and six of Tuberculosis. There were no cases of Smallpox. The Registrar intimated that he had received thirty-eight Conscientious Objections to Vaccination.

The return of Notifications as required by the Board of Health is shown in the following table :—

BURGH OF ARMAN.

A.—NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Typhoid or Enteric Fever	1	...	...	...	...	1	...	...	...	1
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Sкарлатина	36	1	5	26	2	2	...	...	33	3
Diphtheria and Membranous Croup	1	...	2	1	1	...	...	...	1	...
Erysipelas	2	...	...	...	...	1	...	1	...	2
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...
B.—NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.										
Pulmonary Tuberculosis	5	...	...	...	...	2	2	1	2	3
Non-Pulmonary Tuberculosis	1	...	...	1	...	...	...	...	...	1
GRAND TOTAL	49	1	7	28	3	6	2	2	39	10

Housing.—The Census Report for 1921 gives the number of occupied houses as 957, unoccupied 27, and building 6. An enumeration in 1922 shows that there were 976 occupied. Of these 36 were one-roomed houses and 218 two-roomed. The population in the former was 121, an average of nearly 3·4 persons to each house. A further analysis of the one-roomed houses showed that eight had one occupant to each, five had two in each, eight had three, five had four, five had five, three had six, one had seven, and one had nine. The two-roomed houses had a population of 816, of whom at least 146 were living under conditions more or less of overcrowding, 12 of the houses having seven inmates in each, 3 having eight each, 2 nine, and 2 ten each. Certain of the houses now occupied were closed some years ago, being below the standard of habitability, but the housing pressure has led to their being reopened. If this were lessened sufficiently the standard of habitability would be raised, and better housing and health conditions would result.

Water Supply.—Complaints as to shortage in certain higher parts of the town have been more frequent than usual. This may be due in some measure to the incrustation of the 7-inch main from Landheads. Serious leakage does not appear to have been found. The Local Authority are consulting their Engineer on this point, and it is hoped that a suitable remedy may be found. There have been no complaints as to quality, but the conditions at the reservoir, filters, and tank are such as to require careful and constant supervision to keep down vegetable growths.

Sewage.—The town sewers continue to work satisfactorily, and no complaint regarding them has been received. The disposal of the sewage is into the Aman, the greater part being at a point on the tidal portion of the river well below the town, where it does not cause offence.

Dairies.—There are two cowsheds in the Burgh, in which nine cows are kept and from which milk is sold. Two milk-shops retail milk produced outside the Burgh, and there are three vans from which it is retailed. Frequent visits are made by the Sanitary Inspector, and no contravention of the Dairies Order have required to be dealt with.

Slaughter-house.—This has been frequently visited and found in a cleanly condition and well kept. The inspector reports that the animals killed during the year were 656 cattle, 5262 sheep, 200 pigs, and 313 calves.

Unsound Food.—Eleven seizures of carcasses or portions were made, and a certificate that they were unsound and unfit for the food of man was granted before application was made for warrant to destroy.

The **Fellmonger's Premises** continue to be kept in a satisfactory condition, and no complaints regarding it have been received.

There are 72 **Workshops** on the Register. These have been regularly inspected, and generally found in a satisfactory state.

BURGH OF SANQUHAR.

Area, 349 acres.

Population.—At the Thirteenth Decennial Census this was 1700 (male 851, female 849). The enumeration in 1922 showed a population of 1897, of whom 957 were male and 940 female.

Births.—The births registered in the Burgh were 44 (24 male, 20 female). The rate per 1000 persons living was 23·194. The rate for the previous year was 22·353, and for the previous decade (1911-1920) 24·919; for 1901-1910, 25·030; and for 1891-1900, 26·760.

Five births, or 11·4 per cent., were illegitimate. The rate per 1000 unmarried women and widows living between the ages of 15 and 45 (estimated at 198) was 25·25.

The legitimate birth-rate per 1000 married women living between the ages of 15 and 45 (estimated at 190) was 205·26.

Forty-four births were intimated under the provisions of the Notification of Births Acts. These included one pair of twins, three premature and two still-births. There are no midwives within the meaning of the Midwives (Scotland) Act, 1915, known to be practising within the Burgh.

Deaths.—The number registered was 27, but five deaths of residents which occurred elsewhere require to be added, making the total 32, of which 11 were male and 21 female. The table below shows the deaths classified as to cause and in age-groups. The rate per 1000 living was 16·868. Corrected for age and sex distribution (factor ·9781) it was 16·499. The corrected rate for 1921 was 16·659. The average rate for 1911-20 was 14·703; for 1901-10, 18·188; and for 1891-1900, 17·018.

BURGH OF SANQUEHAR.—DEATHS IN 1922.

CAUSE OF DEATH.	All ages.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-	Total
anic Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
us Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
les	2	1	...	1	...	...	...	...	...	...	...	...	...	1031
let Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
oping-cough	1	...	1	...	...	...	...	...	...	...	...	...	...	516
thieria . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
uenza	1	...	...	...	...	...	...	...	...	1	...	...	...	516
cephalitis Lethargica . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ro-spinal Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
er Epidemic Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
monary Phthisis	3	...	...	...	...	...	2	...	1	...	...	...	...	1547
erculous Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ominal Tuberculosis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
er Tuberculous Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ignant Tumours	3	...	...	...	...	...	...	...	1	2	...	...	...	1547
antile Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ngitis (not C.S. or Tub.)	1	...	...	1	...	...	...	...	...	...	...	...	...	516
oplexy	2	...	...	...	...	...	...	...	...	...	1	1	...	1031
ert Disease	2	...	...	...	...	...	...	...	...	1	...	...	1	1031
ases of Arteries . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
chitis	1	...	...	...	...	...	...	...	...	1	...	...	...	516
armonia all forms . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
er Respiratory Diseases	1	...	...	...	...	...	...	...	1	...	...	...	...	516
ritis (under 2 years)	1	1	...	...	...	...	...	...	...	...	...	...	...	516
pendicitis	1	...	...	...	1	...	...	...	...	...	...	...	...	516
er Diseases (not Malignant) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
quantis (Bright's Disease) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
erperal Sepsis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
er Diseases and Accidents . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
of Pregnancy, &c. . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Early Infancy and . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	3	3	...	...	...	...	...	...	...	...	...	...	...	1547
icide . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
olence (excluding Suicide) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ther Defined Diseases	8	...	...	...	...	...	...	...	1	...	...	4	3	4124
Undefined Diseases	2	...	...	...	...	...	...	...	...	1	...	1	...	1031
TOTAL	32	5	1	2	1	...	2	...	4	6	1	6	4	16499

The Zymotic, Tuberculous, and Malignant Disease death-rates are the same for each (1·547). Apoplexy and Heart Disease together give a rate of 2·062.

Deaths of children under one year of age are five, a percentage of 15·6 to the total. One death occurred in the eleventh month of life, one in the eighth week, one in the second week, and two in the first week. The causes were Measles (1), Enteritis (1), Omphalitis (1), and Premature Birth (2). The infantile mortality-rate calculated per 1000 births was 113·63. The rate for 1921 was 78·95. The average of this rate for 1911-20 was 88 : for 1891-1910, 106.

Infectious Diseases.—The notifications received were 25, and included 8 cases of Scarlet Fever, 3 of Diphtheria, 1 of Ophthalmia Neonatorum, 6 of Acute Pneumonia (of which 4 were Lobar and 2 Broncho-pneumonia), 3 of Influenzal Pneumonia, 2 of Pulmonary Tuberculosis, and 2 of Non-pulmonary Tuberculosis.

The eight cases of Scarlet Fever were intimated from seven families, one in March, two in August, two in September, two in October, and one in December. There were no fatalities.

The three cases of Diphtheria appeared to be only clinically so, as swabs from the throat all proved negative. There were no fatalities.

The cases of Ophthalmia Neonatorum and Pneumonia recovered.

No cases of Smallpox occurred, and no Conscientious Objections to Vaccination appear to have been intimated.

A copy of the return of Notifications to the Board of Health is given in the following table :—

BURGH OF SANQUHAR.

A.—NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not re-moved to Hospital.
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	8	1	2	2	...	3	...	...	7	1
Diphtheria and Membranous Croup	3	...	2	...	...	1	...	...	3	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...
B.—NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.										
Ophthalmia Neonatorum	1	1	...	...	...	...	...	...	...	1
Acute Primary Pneumonia	6	...	1	2	...	3	...	...	...	6
Acute Infectious Pneumonia	3	1	...	1	...	1	...	...	...	3
Pulmonary Tuberculosis	2	...	...	...	...	2	...	...	...	2
Non-Pulmonary Tuberculosis	2	...	...	1	...	...	...	...	1	1
Grand Total	25	3	5	6	1	10	...	...	11	14

Housing.—The Census Report for 1921 gives the number of occupied houses as 380, unoccupied 16, and building 7. At the Police Emumeration in 1922 the occupied houses are stated at 393. The population being 1897, this gives an average of 4·8 persons per house. The number of one-roomed houses is 24, with a population of 66 ; there being six with one inmate to each, three with two in each, ten with three, three with four, one with five, and one with seven. Two-roomed houses numbered 192, or nearly 49 per cent. of the whole. Twenty-three of them had seven inmates each, twelve had eight to each, six had nine, one had ten, and one had eleven, which may be taken as an indication of the housing pressure in the Burgh. Ten plans, one of them being for the conversion of Queensberry Hotel into six dwelling-houses, were examined and reported on to the Local Authority. Forty-five visits of inspection were made, and the Inspector attended at six smoke testings of drains. Three intimations of nuisances caused by defective drains were made.

The **Lodging-house** has been regularly inspected, and usually found in good order.

No complaints of shortage of the **Water Supply** was received. The results of examinations (chemically stated as grains per gallon) made during the year have been :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
Total Solids ...	4·31	4·70	4·76	4·87
Saline Solids ...	4·01	4·31	4·29	4·37
Volatile Solids ...	·30	·39	·47	·50
Chlorides ...	·70	·75	·70	·73
Nitrates (as $N_2 O_5$) ...	·0409	·038	·032	·04
Nitrites ...	nil.	nil.	nil.	nil.
Free Ammonia ...	·00074	·00061	·00063	·00182
Albuminoid Ammonia	·0038	·0032	·0036	·00378
B. Coli ...	+10 c.c.	+10 c.c.	+100 c.c.	+100 c.c.

Sewerage.—The purification works at the south-east of the village continue to give a fair effluent, of which no

complaint has been made. The Council are now considering the question of dealing with the crude sewage at the north-west from Lochans, Queensberry Square, &c. The Creamery effluent is not always as satisfactory as it might be, and evidently strict attention is required to lessen the pollution sometimes caused by it.

Dairies.—These remain very much as stated in previous reports, but plans for the alteration and improvement of premises at one of them have been submitted.

The **Slaughter-house** has usually been found in a satisfactory state. One complaint of the deposit of garbage was received.

No contravention of the Factory and Workshop Acts has been found at any of the **Workshops**. No intimations have been made by the Factory Inspector, and no list of Outworkers has been received.

BURGH OF LOCKERBIE.

Area, 453 acres.

Population.—At the Thirteenth Decennial Census this was 2344 (male 1041, female 1303). The enumeration of 1922 showed 1056 males and 1298 females, a total of 2354.

Births.—The births registered in the Burgh were 45 (25 male, 20 female). The rate per 1000 living was 19·116. The rate for the previous year was 22·184. The average rate during 1911-20 was 20·401 ; during 1901-10, 21·299 ; and during 1891-1900, 26·706.

The illegitimate births were 3, or 6·7 per cent. of the total number. The rate per 1000 unmarried women and widows living between the ages of 15 and 45 (estimated at 356) was 8·43.

The legitimate birth-rate per 1000 married women living between the ages of 15 and 45 (estimated at 229) was 183·4.

Forty-two births were intimated under the provisions of the Notification of Births Acts. Five were premature, and two were still-births. There are no midwives within the meaning of the Midwives (Scotland) Act, 1915, known to be practising in the Burgh.

Deaths.—The number registered was 31. The deaths of 5 non-residents were transferred out and deaths of 5 usual residents which occurred elsewhere were transferred in, leaving the total adjusted figure the same as the registered. Eleven were male and twenty female. The table below shows the deaths classified as to cause and in age-groups. The rate per 1000 living was 13·169. Corrected for age and sex distribution (factor ·8889) it becomes 11·706. The corrected rate for 1921 was 11·765. The average rate for 1911-20 was 14·889 ; for 1901-10, 14·444 ; for 1891-1900, 15·009.

BURGH OF LOCKERBIE.—DEATHS IN 1922.

CAUSE OF DEATH.	All ages.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-	95-	100-
Euteric Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Encephalitis Lethargica . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Phthisis	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Tuberculous Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malignant Tumours	4	...	...	...	...	...	...	...	2	2	...	...	...	...	1.5
Rheumatic Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not C.S. or Tub.) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	3	...	...	...	...	...	...	1	...	1	...	1	...	...	1.1
Heart Disease	3	...	...	...	...	...	...	...	...	2	1	...	...	...	1.15
Diseases of Arteries	1	...	...	...	...	...	...	...	...	...	...	1	...	...	3.7
Bronchitis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	2	...	...	...	...	...	...	...	...	...	2	...	...	...	...
Other Respiratory Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Elderitis (under 2 years) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver Diseases (not Malignant) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nephritis (Bright's Disease) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Sepsis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c. . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Early Infancy and Malformations	4	4	...	...	...	...	...	...	...	...	...	...	...	...	1.7
Suicide . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence (excluding Suicide)	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Other Defined Diseases	8	...	...	...	...	...	...	1	...	1	3	2	1	3	...
Ill-Defined Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	31	4	1	...	...	1	...	2	2	8	7	5	1	11	...

The Zymotic and Tuberculous death-rates are low, .378 and .756 per 1000 respectively. The Malignant Disease death-rate is high (1.510) : but the chief causes of death are indicated by the combined rate for Apoplexy, Heart Disease, and Diseases of Arteries (2.644), which is more than double the combined rate for Respiratory Diseases (1.133).

Deaths of children under one year of age are four, or nearly 13 per cent. of the whole. One occurred in the fourth month of life, two in the second week, and one in the first. Premature birth was the cause assigned in all four cases. The infantile mortality-rate (calculated per 1000 births) was 89. In 1921 it was 96 ; during the period 1911-20 it was 85 ; and during 1891-1910, 102.

Infectious Diseases.—Fifty-one notifications were received. These included forty-four cases of Scarlet Fever, one of Diphtheria, two of Erysipelas, one of Acute Pneumonia, two of Pulmonary, and one of Non-pulmonary Tuberculosis. Scarlet Fever was prevalent during the greater part of the year, one case being intimated in March, four in April, three in May, nine in June, fifteen in July, three in August, two in September, three in October, two in November, and two in December. The course of the infection, along with the comparative mildness of the attacks, would seem to be another illustration of the argument that the disease is often so mild as to escape notice, and it is the cases that do not come under notice that tend to keep the infection alive and to pass it on to others. Thirty-six families were attacked, there being one case in each of thirty, two in each of four, and three in each of two. Three of the patients were under school age and nine above.

The case of Diphtheria did not come under observation till nearly a week after the first symptoms and the malady proved fatal on the eighth day.

No cases of Smallpox occurred. Two intimations of Conscientious Objections to Vaccination were received.

A copy of the return of Notifications to the Board of Health is given in the following table :—

BURGH OF LOCKERBIE.

BURGH OF LOCKERBIE.

A -- NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

A -- NUMBER OF CASES.										Cases removed to Hospital.	Cases not moved to Hospital.
DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.			
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	44	...	3	32	9	...	...	...	44	...
Diphtheria and Membranous Croup	1	...	1	...	...	...	...	...	1	...
Erysipelas	2	...	...	1	...	...	...	...	1	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...
B. -- NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.											
Acute Primary Pneumonia	1	...	1	...	...	...	...	...	...	1
Pulmonary Tuberculosis	2	...	...	...	1	1	...	...	2	...
Non-Pulmonary Tuberculosis	1	...	...	...	1	...	...	...	1	...
					11	2	...	...	49	2

Housing.—The Census Report for 1921 gives the number of occupied houses as 594, unoccupied 34, and building 18. An enumeration made by the police in 1922 gives 620 as occupied and 10 unoccupied. Of the 620, twenty-two are houses of one room, the population in these being 53. Ten housed one person only, 5 housed two, 1 three, 2 four, 2 five, and 2 six. The percentage of one-roomed houses was therefore 3·5, the percentage of population in these being 2·25, and the average number of persons to a house 2·4. Over three persons in such houses should be regarded as overcrowding. Of two-roomed houses there were 145, or 23 per cent., with a population of 587 (24 per cent. of the total). Eighteen of them were occupied by more than six persons, there being ten with seven in each, five with eight, two with nine, and one with eleven. Plans for six new buildings, and alterations on ten, were passed by the Dean of Guild Court.

The Common Lodging-house has been found satisfactory when inspected. It has been subjected to night as well as day visits, and is well conducted.

Eight intimations of Nuisances were issued in accordance with the requirements of the Public Health (Scotland) Act, 1897, Section 19. These were all attended to, and notices under Section 20 were not required.

The Water Supply has been well maintained. No complaints of shortage have been made. A sample taken in December gave the following results (stated as grains per gallon):—

Total Solids	...	...	...	9·52
Saline Residue	...	...	...	8·99
Volatile Matter	...	...	...	·53
Chlorine	...	...	...	·66
Nitrates	...	...	...	·109
Nitrites	...	...	...	nil.
Free Ammonia	...	...	...	·00092
Albuminoid Ammonia	...	...	...	·0084

The Sewage Purification Works give a fair effluent but one that is not quite free of putrescence as can be seen in the stream into which it is discharged. No complaint has, however, been made.

The Slaughter-house has been found in a very cleanly state on the occasions on which I have visited, and the Sanitary Inspector reports similarly. The meat prepared for sale is usually very satisfactory. Eight seizures were made—six carcasses and two quarters.

Dairies.—There are three on the Register. They are subject to frequent inspection, and have always been found well kept. The main distribution of milk in the Burgh is still from the Creamery of the Dumfriesshire Dairy Company.

The Workshops have been found in a satisfactory state when visited by the Sanitary Inspector, and no notices or other proceedings have been required.

BURGH OF MOFFAT.

Area, 305 acres.

Population.—At the Thirteenth Decennial Census taken in June, 1921, this was 2426 (male 1087, female 1339). At an enumeration in April, 1922, there were 940 males and 1106 females, giving a total of 2046. Obviously a number of visitors must have been included in the Census.

Births.—The births registered were 32 (17 male, 15 female). The rate per 1000 living was 15·640. The rate for 1921 was 14·427. The average rate for the decade 1911-20 was 16·337; for 1901-10, 15·761; and for 1891-1900, 18·532.

Two births were illegitimate, giving a percentage of 6·25 to the total number, and a rate per 1000 unmarried women and widows living between the ages of 15 and 45 (estimated at 346) of 5·78.

Twenty-eight births were intimated under the provisions of the Notification of Births Acts. No premature or still-birth was notified. There are no midwives within the meaning of the Midwives (Scotland) Act, 1915, known to be practising in the Burgh.

Deaths.—The number registered was 30. Three deaths of non-residents require to be deducted and six deaths of usual residents which occurred elsewhere to be added, leaving the total at 33, of which 14 were male and 19 female. The deaths, classified according to cause and in age-groups, are shown in the table following. The rate per 1000 living was 16·129. Corrected for age and sex-distribution (factor ·8516) this figure becomes 13·735. The rate in 1921 was 7·704. The average corrected rate for 1911-20 was 13·972; for 1901-10, 12·025; and for 1891-1900, 15·695.

BURGH OF MOFFAT.—DEATHS IN 1922.

CAUSE OF DEATH.	All ages.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-	Rate per 1000
Enteric Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erythema . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	3	...	...	...	...	...	...	...	1	...	1	...	1	1.24
Encephalitis Lethargica . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Phthisis	3	...	...	...	...	...	1	...	1	...	1	...	...	1.24
Tuberculous Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases . . . . .	...	...	...	...	...	...	...	...	1	...	3	...	...	1.66
Malignant Tumours	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Septicæmic Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not C.S. or Tub.) . . . . .	...	...	...	...	...	...	...	...	...	2	2	1	...	2.08
Apoplexy	5	...	...	...	...	...	...	...	...	1	3	2	...	2.49
Heart Disease	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Arteries . . . . .	...	...	...	...	...	...	...	...	...	...	1	1	...	...
Bronchitis	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms) . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Other Respiratory Diseases	2	1	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis (under 2 years) . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Appendicitis	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver Diseases (not Malignant) . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Nephritis (Bright's Disease)	4	...	...	...	1	...	2	...	...	...	...	...	...	...
Puerperal Sepsis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c. . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Early Infancy and Malformations . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suicide . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence (excluding Suicide) . . . . .	...	...	...	...	...	...	...	...	...	1	...	1	1	...
Other Defined Diseases	3	...	...	...	...	...	...	...	...	1	...	...	...	...
Ill-Defined Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	33	1	...	...	1	...	3	...	5	3	14	5	1	13.73

The Zymotic death-rate is *nil*. The Influenzal and Tuberculous rates are the same (1·249). The chief contributors to the death-rate are the Heart Diseases (2·497) and Apoplexy (2·081).

There was one death of a child under one year of age, equivalent to three per cent. of the total number. The infantile mortality rate (calculated per 1000 births) was 31·25. In 1921 it was 28·57. The average of this rate during the period 1911-20 was 38 ; from 1891 to 1910 it was 75.

Infectious Diseases.—Four notifications were received. They were one case of Erysipelas, one of Pneumonia, and two of Pulmonary Tuberculosis.

No case of Smallpox occurred, and no Conscientious Objections to Vaccination appear to have been intimated.

The return made to the Board of Health is shown in the following table :—

BURGH OF MOFFAT.

A. — NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not re-moved to Hospital.
Typhoid or Enteric Fever
Typhus Fever
Smallpox
Scarlet Fever or Scarlatina
Diphtheria and Membranous Croup...
Erysipelas ...	1	...	...	...	...	...	...	1	...	1
Puerperal Fever
Cholera
Relapsing Fever
Continued fever...

B. — NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.

Acute Primary Pneumonia	1	...	...	...	1	...	...	...	...	1
Pulmonary Tuberculosis	2	...	...	...	2	...	...	...	2	...
GRAND TOTAL	4	...	...	...	3	...	...	1	2	2

Housing.—The Census Report of 1921 indicates that the number of houses occupied on 19th June of that year was 499, of unoccupied 50, while 8 were being built. The enumeration of 1922 gives the number of occupied houses as 526, with 13 unoccupied. The number of one-roomed houses in the latter year was 7 and the population in them 10, there being four with one inmate to each and three with two. The percentage of one-roomed houses to the total is 1.33. Of two-roomed houses there were 81, or 15 per cent., with a population of 236. Twenty-one of these had one inmate to each, eleven had two, twenty-four had three, ten had four, nine had five, and six had six. The problem of overcrowding does not appear to be so serious in this Burgh as in certain other parts of the County. Eight houses have been erected under the Housing Scheme, and are now occupied by ex-service men.

Water Supply.—The two mains carrying water from Granton have been scraped, and the flow is much improved so far as the higher level pipes are concerned. No complaint has been received regarding quality, which is presumably good, but no check by analysis of samples is made so far as I am aware.

The Sewage Works, which are to the south of the Burgh, have worked fairly well, and produce an effluent which creates little perceptible nuisance and does not give rise to complaints.

As regards house drains, the Sanitary Inspector reports the application of the smoke test on six occasions to new drainage systems and on seven to existing systems.

Nuisances dealt with by the Sanitary Inspector were twenty-three, consisting chiefly of choked drains, defective water-closets, and sanitary fittings. Five intimations were issued. In no case was a notice under Section 20 of the Public Health (Scotland) Act, 1897, necessary, and no certificate was required from me.

The **Slaughter-house** is kept in a clean and satisfactory state.

There are two **Milkshops** from which milk produced outside the Burgh is sold. They have always been found in a satisfactory state when inspected.

There are five **Bakehouses** and fifty-one other **Workshops** on the Register. Premises have usually been found to be well kept, clean, and satisfactory.

BURGH OF LANGHOLM.

Area, 204 acres.

Population.—At the Thirteenth Decennial Census this was 2653 (1151 male, 1502 female). At the enumeration of 1922 there were 1155 males and 1497 females, giving a total of 2652.

Births.—The births registered in the Burgh were 57 (27 male, 30 female). The rate per 1000 living was 21·493. The rate for 1921 was 17·339. For the decade 1911-20 the average rate was 15·028 ; for 1901-10, 17·895 ; and for 1891-1900, 20·112.

All the births were legitimate. The birth-rate per 1000 married women living between the ages of 15 and 45 (estimated at 239) was 238·5.

Fifty-six births were intimated under the provisions of the Notification of Births Acts. They included two pairs of twins, eight premature and two still-births. There are no midwives within the meaning of the Midwives (Scotland) Act, 1915, known to be practising in the Burgh.

Deaths.—The number registered was 42. Two deaths of non-residents require to be deducted and six of usual residents which occurred elsewhere to be added, making the total 46, of which 18 were male and 28 female. The table following shows these classified according to cause and in age-groups. The rate per 1000 living was 17·345. Corrected for age and sex distribution (factor ·8727) it was 15·136. The rate for 1921 was 15·109. The average corrected death-rate for 1911-20 was 15·195 ; for 1901-10, 14·876 ; for 1891-1900, 14·545.

BURGH OF LANGHOLM.—DEATHS IN 1922.

CAUSE OF DEATH.	All ages.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-	Total per 100
Bacterial Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	4	...	1	...	...	...	...	...	...	1	1	...	1	1.316
Cerebro-spinal Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Phthisis	1	...	...	...	...	...	...	1	...	...	...	...	...	.329
Tuberculous Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	1	...	...	...	...	...	1	...	...	...	...	...	...	.323
Malignant Tumours	2	...	...	...	...	...	...	...	...	2	...	...	...	.678
Miasmatic Fever	1	...	...	...	...	...	...	...	1	...	...	...	...	.329
Meningitis (not C.S. or Tub.) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	4	...	...	...	...	...	...	...	...	...	3	...	1	1.316
Heart Disease	5	...	...	...	...	...	...	1	...	1	1	2	...	1.645
Diseases of Arteries	3	...	...	...	...	...	...	...	1	1	1	...	...	.987
Bronchitis	1	...	...	...	...	...	...	...	...	...	...	1	...	.329
Pneumonia (all forms) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis (under 2 years) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver Diseases (not Malignant) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nephritis (Bright's Disease) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hyperperal Sepsis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy, &c.	2	...	...	...	...	1	...	1	...	...	...	...	...	.678
Diseases of Early Infancy and Malformations	4	4	...	...	...	...	...	...	...	...	...	...	...	1.316
Suicide . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence (excluding Suicide)	1	...	...	...	...	...	...	...	...	1	...	...	...	.329
Other Defined Diseases	16	...	...	1	1	...	...	2	...	3	4	3	2	5.264
Ill-Defined Diseases	1	...	...	...	...	...	...	...	1	...	...	...	...	.329
TOTAL	46	4	1	1	1	1	1	5	3	9	10	6	4	15.136

The Zymotic death-rate was *nil*, the total Tuberculous 658. Apoplexy, Heart Diseases, and Diseases of Arteries are the chief contributors to the causes of death, their combined rate being 3.948.

The deaths of children under one year of age were four, being a percentage of 8.7 to the total. The causes of death were given as Spina Bifida (1) Marasmus (2), and Premature Birth (1). One was in the sixth month of life, one in the sixth week, one in the second, and one in the first. The infantile mortality-rate (calculated per 1000 births) was 70.18. In 1921 it was 65.22. The average of the decade 1911-20 was 63; from 1891 to 1910 it was 93.

Infectious Diseases.—Thirteen notifications were received. They included nine cases of Diphtheria, one of Erysipelas, one of Pulmonary and two of Non-pulmonary Tuberculosis.

Two cases of Diphtheria were reported in January, one in February, one in March, four in August, and one in December. Eight families were affected, there being seven with one case in each and one with two. There were no fatalities.

No cases of Smallpox occurred. Three Conscientious Objections to Vaccination were intimated.

The return made to the Board of Health is shown in the following table:—

BURGH OF LANGHOLM.

A.—NUMBER OF CASES NOTIFIED TO THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

DISEASE.	At all Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	9	...	1	6	1	1	...	...	7	2
Erysipelas	1	...	...	...	...	...	...	...	...	1
Epidemic Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...
B.—NOTIFIED IN TERMS OF REGULATIONS MADE UNDER SECTION 78 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.										
Ophthalmia Neonatorum	...	...	...	...	...	...	...	...	...	...
Acute Primary Pneumonia	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	1	...	...	...	...	1	...	...	1	...
Non-Pulmonary Tuberculosis	2	...	...	...	...	2	...	...	...	...
GRAND TOTAL	13	...	1	6	1	4	1	...	8	5

Housing.—The Census Report for 1921 showed that there was 773 occupied and 46 unoccupied houses in the Burgh when the Census was taken. The enumeration made by the police in 1922 showed 789 occupied and 22 unoccupied. Of the occupied houses 21 were returned as having one room only. The population in these amounted to 37, there being nine with one person to each, nine others with two each, two with three, and one with four. The two-roomed occupied houses enumerated were 193, the population in them being 595, or an average of 3 persons to each house. Overcrowding does not therefore appear to be a pressing matter in the Burgh, but six of the houses were returned as having seven inmates to each, three with eight to each, one with nine, and one with ten. The improvements at 88 High Street are now being carried out.

Tents and Vans.—These have been kept under supervision by the Sanitary Inspector, who reports having made eighteen inspections, in the course of which he found three in a dirty state and had them cleansed. One case of sickness occurred among the van-dwellers, but none of infectious disease.

Water Supply.—This is from springs on Terrona, and though there was some fear of shortage in 1921 the supply was found ample in 1922. Certain leakages found had been repaired, with a good result. The quality of the water appears to be good, but I am not aware whether any samples have been taken for analysis from time to time.

Sewage.—Nothing was done during 1922 under the agreement between the Board of Health, County Council, and Town Council, but since the end of the year a scheme for tank settlement has been approved by the neutral engineer appointed by the Board. It seems to be believed that the volume of the Esk will always be sufficient to dilute any putrescent effluent. The site of the tank is much nearer the town than that proposed by Mr Balfour.

whom the Town Council originally consulted, and it remains to be seen whether the removal of sludge (which must be done from time to time) can be carried out without creating some offence.

Slaughter-houses.—The three licensed slaughter-houses have been regularly inspected, and generally found in a fairly satisfactory state as regards cleanliness and lime-washing.

Dairies and Cowsheds.—There are five on the Register. The number of cows is twenty-three. Limewashing has been regularly attended to. No enquiries seem to have been made as to "grading."

Workshops.—There are now twenty-six on the Register, viz. :—Five bakers, seven tailors, three dressmakers, two shoemakers, one saddler, two printers, two joiners, two laundries, one blacksmith, and one motor garage. These were found in a cleanly state when inspected, and no complaints have been received from the Factory Inspector.

Nuisances.—Thirty have been dealt with by the Sanitary Inspector. They include eight relating to accumulations of manure, nine to choked drains, two to defective drain and waste-pipe, three to defective chimneys, two to gas escapes, and six of a miscellaneous character.

LABORATORY.

To the Medical Officer of Health.

Sir, .

I beg to submit a Report of the work of the County Health Laboratory for the year ending 31st December, 1922.

Two thousand and twenty-two examinations were made during the year—the figure being the same as for 1921.

SWABS FOR DIPHTHERIA.

One thousand and seventy-five swabs were examined, 278 of which were positive and 797 negative. Twelve additional swabs were also examined for other organisms. Four hundred and eighty-five of the 1075 occurred in the period October-December.

SPUTA FOR TUBERCLE.

Of a total of 341 sputa examined, 93 were found to contain the tubercle bacillus; 248 failed to show it. Twenty-five sputa were examined for other organisms.

BLOOD FOR WIDAL REACTION.

The 21 specimens examined gave in 2 cases a positive reaction for *B. Typhosus*, the other 19 being negative to that organism and to *Paratyphosus A* and *B*.

WASSERMANN REACTIONS.

One hundred and fifty-four specimens were examined, 63 proving positive and 91 negative. There was the same marked predominance of urban over rural incidence as in 1921.

EXAMINATIONS FOR GONOCOCCI.

Sixty specimens were examined, of which 34 were positive and 26 negative. As in 1921, the majority of these were from rural districts.

EXAMINATIONS FOR SPIRONEMA PALLIDUM.

Six examinations were made, 2 of which were positive and 4 negative.

EXAMINATIONS FOR ANTHRAX.

Sixteen specimens were examined, 5 of which were positive and 11 negative.

EXAMINATIONS FOR MALARIA.

Eight specimens showed 1 positive and 7 negative results—the positive case was that of a child with a history of residence in the tropics.

EXAMINATIONS OF FÆCES.

Nineteen specimens were examined for organisms and parasites such as Typhoid and Dysentery and Tubercle.

EXAMINATIONS OF URINE.

Twenty-six specimens were examined on the same lines as above.

EXAMINATIONS OF PUS AND PATHOLOGICAL FLUIDS.

Sixty-eight specimens were examined for various organisms.

EXAMINATIONS OF MILK.

Six specimens examined for general condition.

WATER EXAMINATIONS.

One hundred and forty-seven samples were examined from Special Water Districts, from Gretna Waterworks, and from various sources in the County and Burghs.

GENERAL BLOOD EXAMINATIONS.

Twenty-one bloods were examined, mostly with a view to confirming diagnosis. One Blood Culture was made for organisms.

EXAMINATION OF CEREBRO-SPINAL FLUIDS.

Seven specimens examined, none of which showed the organism of Cerebro-spinal Meningitis.

MISCELLANEOUS EXAMINATIONS.

Nine specimens—mostly hair for presence of Ringworm.

VACCINES.

Thirty-six vaccines were prepared for practitioners from various of the above specimens, such as swabs, sputa, pus, &c.

I am, Sir,

Your obedient Servant,

JOHN RITCHIE.

TABLE 1

		1922.				TOTAL.	
		QUARTERS.					
		1st.	2nd.	3rd.	4th.		
Swabs for Diphtheria ...	{	+ 36 - 178	25 161	69 121	148 337	- 278 - 797	1087
Other Swabs ...	{	3 ...	...	5 ...	4 ...	12...	...
Sputa for Tubercle Bacilli	{	+ 20 - 62	28 75	26 57	19 54	- 93 - 248	378
Other Sputa ...	{	5 ...	7 ...	9 ...	4 ...	25...	...
BLOODS :—							
Wassermann ...	{	+ 19 - 23	12 20	21 24	11 24	- 43 - 91	154
Widal ...	{	+ 1 - 10	...	...	1 2	- 2 - 19	21
Anthrax ...	{	+ 1 - 4	3 5	1 ...	...	- 5 - 11	16
Malaria ...	{	+ ... - 2	1 2	...	...	- 1 - 7	8
Cultures ...	{	1 ...	...	...	...	...	1
Other Examinations	{	3 ...	11 ...	2 ...	5 ...	...	21
Gonococci ...	{	+ 8 - 9	5 10	7 5	6 10	+ 26 - 34	...
Spirochaeta Pallidum ...	{	+ 1 - 2	1 1	...	...	- 2 - 4	6
Cerebro-spinal Fluids	{	+ ... - ...	...	...	...	...	7
Faeces ...	{	8 ...	6 ...	3 ...	2 ...	...	19
Urine ...	{	7 ...	9 ...	8 ...	2 ...	...	26
Pus, &c. ...	{	20 ...	19 ...	16 ...	13 ...	...	68
Milk ...	{	4 ...	...	...	2 ...	...	6
Water ...	{	35 ...	47 ...	32 ...	33 ...	...	147
Miscellaneous ...	{	1 ...	1 ...	1 ...	6 ...	...	9
Total ...		463	457	412	690	=	2022

COUNTY OF DUMFRIES.

THIRTY-THIRD

ANNUAL REPORT

UPON THE

*Health and Sanitary Condition of
the County.*

1923.

BY

J. MAXWELL ROSS, M.A., F.R.C.S. Ed.,
County Medical Officer.

DUMFRIES :

ROBERT DINWIDDIE, PRINTER AND LITHOGRAPHER.

1924.